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# PREADOLESCENT RELIGIOUS EXPERIENCE ENHANCES TEMPORAL LOBE SIGNS IN NORMAL YOUNG ADULTS [1]

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*Summary*.—The hypothesis was verified that an ontogenetically earlier onset of temporal lobe transients, as defined by a preadolescent religious experience, facilitates more frequent and varied temporal lobe signs in adults. Data were collected for 868 male and female university students in psychology over a 10-year period; the 19% of students who reported this early experience displayed more frequent depersonalization, beliefs in psi phenomena, sensations of presence, sensitivity to odors, widened affect, childhood imaginary playmates, and left (writing) handedness. Early experients were more likely to display confusion of boundaries between themselves, other people, and cosmic forces.

The concepts of Bear's (1979) sensory-limbic hyperconnectionism and the continuum of temporal lobe lability (Persinger, 1983; Persinger & Makarec, 1987) have ignored the ontogenetic factor. If enhanced temporal lobe lability occurs during childhood, before the development of abstract cognitive stages, then one would expect greater influence of this lability upon beliefs, temporal lobe-related symptoms, and correlative attributions (particularly spontaneous psychical experiences). To test this hypothesis the Personal Philosophy Inventories of the 174 students who indicated that their first religious experience had occurred before they were teenagers were contrasted with those of the remaining 694 students who denied an experience.

The inventories had been collected over a 10-yr. period primarily from first- and second-year university students (mean age = 25 yr., standard deviation = 8 yr., range 16 to 59 yr.) who were enrolled in first-year psychology courses. Major clusters of items ($n$ in parentheses were: control (16), lie (9), complex partial seizure signs (16), interictal behaviors (14), and secondary indicators (26) of limbic or temporal lobe epilepsy. The last three clusters composed the Total Temporal Lobe Signs (56) scale. Other clusters included exotic beliefs, religious beliefs, fear and egotism items (Persinger & Makarec, 1990). Chi-squared analyses indicated no significant sex difference with respect to the reported incidence of the early religious experience; there were also no significant differences (chi squared $< 2.00$) between the occurrence of this experience and frequency of church attendance ($< 1$/mon., $> 1$/mon., $> 1$ per week) or major denomination (Roman Catholic vs Protestant). Because the significant clusters of Temporal Lobe Signs were identical for the presence or absence of a preadolescent religious experience for men and women, the sexes were combined.

One-way analyses of variance (all $df$s = 1,866) were completed for the major clusters. The scores for those who did not report or did report a preteen religious experience for each cluster were not statistically significant ($p > .05$) for the control and lie clusters; the means and standard deviations (in parentheses) on control clusters were 78 (10) and 79 (11); on lie clusters 77 (16) and 75 (17), respectively. Those who had reported preadolescent religious experiences displayed more complex partial epileptic signs ($F = 57.09$, $p < .001$), interictal ($F = 38.26$, $p < .001$), and secondary signs ($F = 57.34$, $p < .001$) relative to those who had not. The Total Temporal Lobe Signs score was also elevated significantly ($F = 57.31$). The means and standard deviations for

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those who did not vs those who did report early religious experiences were: partial signs 26 (17), 37 (21), interictal signs 32 (15), 40 (16), secondary signs 38 (12), 46 (13), and total signs 33 (12), 42 (14). Those who had the preadolescent experience also endorsed significantly ($p < .001$) more exotic ($F = 31.95$) and religious ($F = 33.82$) beliefs relative to those who had not reported the experience.

Compared to young adults who did not recall a preteen religious experience, those who professed this experience were more likely (all $ps < .001$; PPI item numbers in parentheses) to: (1) have heard an inner voice call their name (Q76), (2) had felt the presence of a Cosmic Consciousness two or three times during their lives (Q137), (3) had been hit in the head or blacked out at least once during childhood (Q21), (4) feel that God healed them or one of their family (Q43), (5) had experienced their souls leaving their bodies (Q71), (6) think that people should be guided to ensure their spiritual development (Q128), (7) feel that their thoughts can be read by other people (Q20), (8) believe there is an eternal and Infinite Force (Q101), (9) be left (defined by writing) handed, and (10) have felt the presence of another Being late at night (Q38).

These 10 items represented the content of 35 items that indicated significant ($p < .001$) group differences. Discriminant analyses with the 10 items generated a function (canonical correlation = 0.37) that accurately classified only 70% of the cases. Entry of all 35 items generated a function whose coefficient was 0.40; the function accurately classified only 73% of the cases. People who reported a preteen religious experience also displayed significant ($F > 12$, $p < .001$) increased incidences of experiencing visions, depersonalization (such "possession by evil spirits," feeling as if things are "not real" or as if one were somewhere else), self-centeredness (my boyfriend or girlfriend should do what I want out of love for me), intense smells, early morning meaningful experiences, odd vibrations within their bodies, imaginary childhood playmates, and acquisition of a meditation technique.

The results support the hypothesis that the earlier the onset of limbic lability, the more subjective experiences are infused with affect and meaningfulness. These experiences strongly influence the person's beliefs which subsequently modify perceptions of physical and social stimuli. The prevalence of indicators of dissociation, variants of presence (from imaginary playmates to spiritual beings) and left handedness suggest (at least intermittent) increases in right relative to left temporal lobe activity. The absence of marked differences between men and women or between two traditions of Christianity suggests the existence of a distinct temporal lobe lability factor in human experience. Its effects upon complex problem solving and assessment of social conflicts must still be determined.

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